UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,616	04/14/2005	Sebastiaan Antonius Fransiscus Arnoldus Van Den Heuvel	NL 021072	8187

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS	ARANI, TAGHI T	
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	2139	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/531,616	VAN DEN HEUVEL ET AL.
Office Action Summary	Examiner	Art Unit	
	Taghi T. Arani	2139	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _07 May 2007_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-22_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-22 have been examined and are pending.

Response to Arguments

2.   Applicant's arguments filed 05/07/2007   have been fully considered but they are not

persuasive.

Applicant has argued that the use of *Choi* as the basis of a rejection under 35 U.S.C.§

102(e) is improper because *Choi* does not qualify as prior art". Applicant argues that "*Choi*

claims the benefit of three provisional patent applications, only two of which (Provisional

Patent Application Nos. 60/410,816 and 60/418,160) have an earlier filing date than the priority

date of the present application" and that the Provisional Patent Applications do not find support

the portions of *Choi* relied on by the Examiner in the rejections.

Applicant further argues that *Choi* for additional reasons does not qualify as prior art

because, for example, Choi does not describe a method in which "each data fragment of the set

comprises its own unique identifier" and "the signature comprises references to the respective

unique identifiers of the data fragments of the set ".

The Examiner responds that Provisional Patent Application 60/418,8160 discloses the

concept of container containing segment or segments of a metadata described in XML.

60/418,8160 discloses that a segment of a metadata is a sub tree of the whole metadata in XML

tree representation. 60/418,8160 discloses (steps 2 and 3) that the header of a container (i.e. a

fragment of the data fragments of the set) includes flags (F-1, F-2, and F-3, i.e. each data

fragment comprises its unique identifier) identifying the scheme and the manner in which an

integrity check being applied to a fragment data. 60/418,8160 discloses that one possible

integrity check scheme is message authentication code (MAC), wherein the fragment data is

hashed and signed using a private key .K (producing a digital signature). 60/418,8160 discloses

that the client side then validates and verifies the integrity check by identifying the flags F-1, F-2

and F3 in the container header and by using the encrypted key K E(k) received either through

container or via separate channel..

Applicants still have failed to identify specific claim limitations', which would define a

patentable distinction over prior arts. Therefore, the examiner asserts that cited prior art does

teach or suggest the subject matter recited in independent claims 1, 18-22 and in subsequent

dependent claims 2-17. Accordingly, rejections for claims 1-22 are respectfully maintained.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3.   Claims 21 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claim 21 recites "signal " stored on a computer readable medium". The term "signal" is

not limited to tangible embodiment. Furthermore, when nonfunctional descriptive material is

recorded on some computer-readable medium, in a computer or on an electromagnetic carrier

signal, it is not statutory since no requisite functionality is present to satisfy the practical

application requirement. Merely claiming nonfunctional descriptive material, i.e., abstract ideas,

stored on a computer- readable medium, in a computer, or on an electromagnetic carrier signal,

does not make it statutory. See Diehr, 450 U.S. at 185-86, 209 USPQ at 8.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1-10, 15-16, 18-20 rejected under 35 U.S.C. 102(e) as being anticipated by US

2004/0123109 to Choi.

As per claim 1,18-19 and 21, Choi teaches a method, system, signature device and

signal for providing data integrity authentication and data protection, in which a set of data

fragments is protected by a signature (Abstract, Fig. 6 and associated text, paragraph 0045, Fig. 1

and associated text) characterized in that each data fragment of the set comprises its own unique

identifier (Fig. 6, item 630, metadata digest information for selected fragment data, see also

paragraph 0045), the signature comprises references to the respective unique identifiers of the

data fragments of the set (paragraph 0059-0060, and 0077, where pointer information indicating

a relationship between each of the plurality of metadata (unique identifier) fragment data and its

corresponding metadata digest information and metadata authentication signature are disclosed,

see also paragraph 0077, where in the case of a SOAP message –level authentication,

authentication information is included in the header of a SOAP message together with a pointer

for part of the metadata contained in the body of the SOAP message, see also paragraphs 0076

and 0078)) .

As per claim 2, Choi teaches the method according to claim 1, in which the set is

protected by multiple signatures, and in which the multiple signatures can originate from

different sources (Fig. 3, metadata authentication information comprising first, second, etc.

authentication signature information, see also paragraphs 0039-0040).

As per claim 3, Choi teaches the method according to claim 1, in which for each data

fragment a hash is generated and the hashes of the data fragments of the set are used to compute

the signature (paragraphs 0056-57 and paragraph 0040,where metadata container-level container

authentication information are hash values).

As per claim 4, Choi teaches the method according to claim 1, in which the data

fragments are expressed in XML (paragraphs, 0031, 0047 and 0076, where each metadata

transmission packet has a binary format such as binary XML format).

As per claim 5, Choi teaches the method according to claim 1, in which the data

fragments constitute TV-Anytime metadata (paragraph 0076).

As per claim 6, Choi teaches the method according to claim 1, in which the signature is

stored according to the xmldsig standard (paragraph 0074 and 0076, where authenticated

metadata fragment using SOAP message is disclosed).

As per claim 9, hoi teaches he method according to claim 1, in which the references are

also protected by the signature (paragraph 0077, where in the case of a SOAP message –level

authentication, authentication information is included in the header of a SOAP message together
with a pointer for part of the metadata contained in the body of the SOAP message, see also
paragraphs 0076 and 0078).

As per claim 10, Choi teaches the method according to claim 1, in which at least one
signature index file is added (paragraph 0044, se also claim 37).

As per claim 15, Choi teaches the method according to claim 4, in which the signature is
included in an XML document (Fig. 4 and Fig. 11 including associated texts).

As per claim 16, Choi teaches the method according to claim 4, in which the signature is
provided in a wrapper XML document, comprising the original XML data document ((paragraph
0077, where in the case of a SOAP message –level authentication, authentication information is
included in the header of a SOAP message together with a pointer for part of the metadata
contained in the body of the SOAP message, see also paragraphs 0076 and 0078).

As per claim 20, Choi teaches verification device (10) for verifying data integrity
authentication and data protection, the device being arranged to handle data fragments, the
device being arranged to verify a signature to protect a set of data fragments ((paragraphs 0051-
0052, Fig. 7 and associated text, where the process of verifying the received metadata container
by generating the metadata digest information), characterized in that the device is arranged to
address each data fragment to be protected by a unique identifier included in the data fragment,
and the device is arranged to verify signature information comprising the unique identifiers to
refer to the data fragments of the set. (paragraphs 0053-0054).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   **Claims 7 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi as

applied to claim 1 above, and further in view of "A method to process XML document with

preserving their representation ", IBM technical Disclosure Bulletin, October 2001, UK

(hereinafter, "IBM TD")

While Choi teaches standard description of metadata access and usage rights and

implementation thereof using XrML, XACMI, or SAMI (paragraph 0076), Choi does not

disclose but IBM TD discloses "a cannolization function...used before generating the signature"

and/or "transform function on a superset of data fragments (IBM, TD, page 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the teachings of IBM TD into the method and system of

Choi's XML signature in order to avoid the problem caused by digital signature on XML

document and to create a standard or canonical representation before computing a digital

signature.

6.   Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi as

applied to claim 1 above, and further in view of US 2002/0038352 to Ashley.

As per claims 11 and 12, Choi discloses the method according to claim 1, except in which the unique identifier in a particular data fragment starts with a unique identification of an organization that generated the particular data fragment, in which the unique identification is the DNS name of the organization.

However, in an analogous art, Ashley discloses that in TV-Anytime technology (paragraph 0005) content identifiers (Fig. 4 and associated text, CRID's) include Authority names (the organizations that create CRID's), each one uniquely identified by a name and TV-Anytime standard uses the DNS name registration system to ensure that these names are unique (see also paragraph 0030).

It would have been obvious to one of ordinary skill in the art to incorporate the teachings of Ashley into the method and system of Choi's metadata integrity, authentication and protection to have the unique identifier start with a unique identification of the organization that generated the particular data fragment such as the DNS name of the organization in conformance with the TV-Anytime standard to allow a user to find the content they want regardless of time and location where the content can be acquired (paragraph 0004)

As per claim 13, Choi teaches the method according to claim 1, except in which the reference is accompanied by a location indicator that indicates the location of the data fragment the reference refers to.

However in and analogous art, Ashley (paragraphs 0004-0005, Fig. 4 and associated text) teaches that in TV-Anytime technology a CRID in which a unique Authority name embedded resolves the time and location of the content (see also paragraph 0029).

It would have been obvious to one of ordinary skill in the art to incorporate the teachings

of Ashley into the method and system of Choi's metadata integrity, authentication and protection

in which reference is accompanied by a location indicator that indicates the location of the data

fragment the reference refers to, in order to allow a user to find the content they want regardless

of time and location where the content can be acquired (paragraph 0004).

As per claim 14, Choi does not teach but Ashley teaches in which the location indicator

indicates the path through the data to the referenced data fragment (paragraph 0040-0050).

The Examiner supplies the same rationale for the combination of Choi-Ashley as

provided in claim 13 above.

7.   Claim 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi as applied

to claim 1 above, and further in view of US 2003/0093678 to Bowe et al. (hereinafter "Bowe").

As per claim 17, Choi teaches the method according to claim 4, except in which the

XML signature provided in a separate XML document, referring to the original XML data

document.

However, in an analogous art, Bowe teaches XML signature provided in a separate XML

document, referring to the original XML data document (paragraph 0059, where signed object

can have a detached signature and when the signed object contains the signature and the address

of the data object).

It would have been obvious to one of ordinary skill in the art to employ the teachings of

Bowe in the method and system of Choi to have a separate   XML signature, referencing the

original XML data document so that compromise of one does no result in the generation of unintended signatures (Bowe, paragraph 0034).

Action is Final

8.   **THIS ACTION IS FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

9.   Prior arts made of record, not relied upon:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taghi T. Arani whose telephone number is (571) 272-3787. The examiner can normally be reached on 8:00-5:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TAGHI ARANI
PRIMARY EXAMINER

7-19-04